PROC. BIOL. SOC. WASH.
95(2), 1982, pp. 319–324

TWO NEW SPECIES OF LEPTOMYSINID MYSIDS (CRUSTACEA, MYSIDACEA) FROM SOUTHERN CALIFORNIA

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Abstract.—Two new species of leptomysinid mysids, *Cubanomysis mysteriosa,* the second species of the genus described by Bacescu (1968), and *Mysidopsis cathengelae* are described from the San Onofre region of the Newport-La Jolla Shelf, California.

Only one species of the genus Cubanomysis is known, *C. jimenesi* Bacescu, 1968 from Cuba. The species described below has been collected in shallow water, out to a depth of 8 meters, off the coast of Southern California.

Cubanomysis mysteriosa, new species
Figs. 1–2

Material examined.—Southern California, San Onofre State Beach, 8 meters depth, 15 January 1977: ♂ holotype (USNM 184074), 2 ♂, 2 ♀ paratypes (USNM 184075).

Etymology.—From the Greek "*mysterion*" (mystery), referring to the unpredictable occurrence of this species.

Description.—Small, delicate mysid, 3 mm length. Carapace rounded, slightly produced into rounded rostrum between eyes. Eyes large, globose. Antennal scale 7 times as long as broad, sparsely setose all around, with large apical segment, apex bluntly pointed, extending beyond peduncle of antennule by ¼ (♂) to $^1/_5$ (♀) its length. Distal joint of antennal peduncle slightly shorter than preceding joint, whole peduncle extending $^7/_{10}$ (♂) to $^6/_{10}$ (♀) length of antennal scale.

Mandible with large masticatory surface, with small teeth on cutting edge. Distal segment of palp with 14 plumose setae and 1 terminal simple seta. Maxilla with small exopod bearing 5 setae.

Endopod of first thoracic limb strong, distal article with dactyl claw and 6 simple setae. Last article of endopod of second thoracic limb with 3 strong setae, plumose and recurved on the interior face and 7 simple and one plumose setae on the distal curvature. Endopods of third to eighth thoracic limbs delicate, carpopropodus divided into 2 subjoints; 8 large articles on exopods.

Sixth abdominal somite twice as long as preceding somite.

First pleopod of adult male without exopod. Pleopods II–V biramous. Pleopod IV with 2 branches of 6 articles each, exopod longer than endopod, terminating in a long curved seta bearing 2 rows of fine spines on distal third. Seta extends past distal tip of telson when pleopod IV is parallel to abdomen.

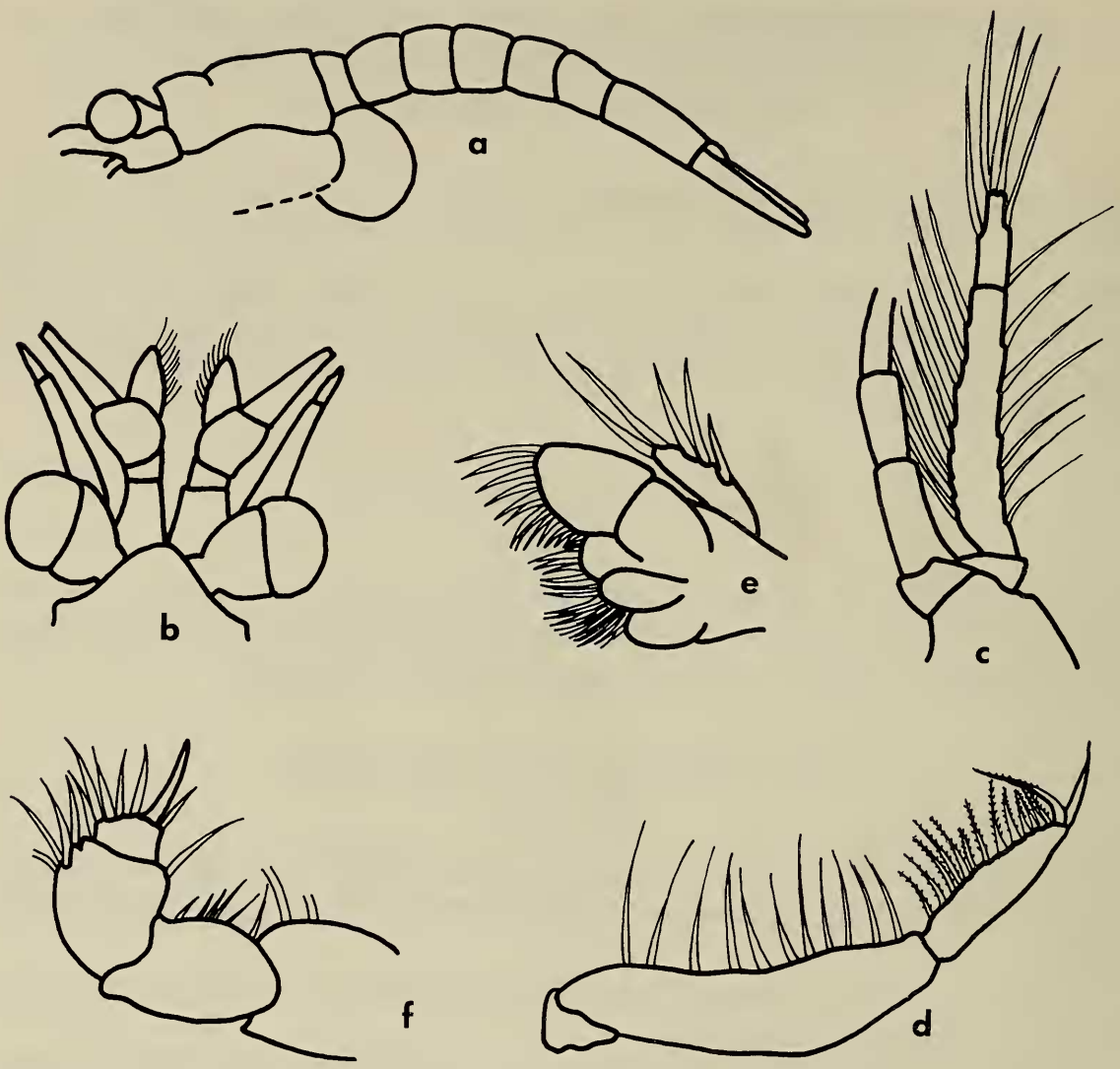

Fig. 1. *Cubanomysis mysteriosa:* a, Whole body, lateral, ♀; b, Rostrum, eyes antennular peduncle, antennal scale, dorsal, ♂; c, Antennal scale and antennal peduncle, ventral ♂; d, Right mandibular palp, ♂; e, Maxilla, ♂; f, Thoracic endopod 1, distal segments, ♂.

Telson short, tip extending to distal end of statocyst, constricted distally. Lateral margins bare. Apex emarginate bearing 16–24 closely set spines.

Endopods of uropods shorter than exopods; inner lower margin with 10 short spines. Statocysts large with hyaline area appearing swollen.

Remarks.—The present new species is closely allied to *C. jimenesi* (Bacescu 1968, Brattegard 1969) but differs from the latter in the following features: 1) more robust form of the endopods of the first and second thoracic appendages, 2) setation of the last article of the endopod of the second thoracic limb, 3) spination rather than serration of the terminal seta of the exopod of the fourth pleopod of the adult male and 4) spination of the telson.

There are four known species of the genus *Mysidopsis* in Southern California, *M. californica* Tattersall, 1951, *M. onofrensis* and *M. brattegartii* Bacescu and Gleye, 1969, and *M. intii* Holmquist (personal observation). The species described below has occurred regularly out to a depth of 12 meters in our nearshore epibenthic samples since the beginning of our studies in 1976.

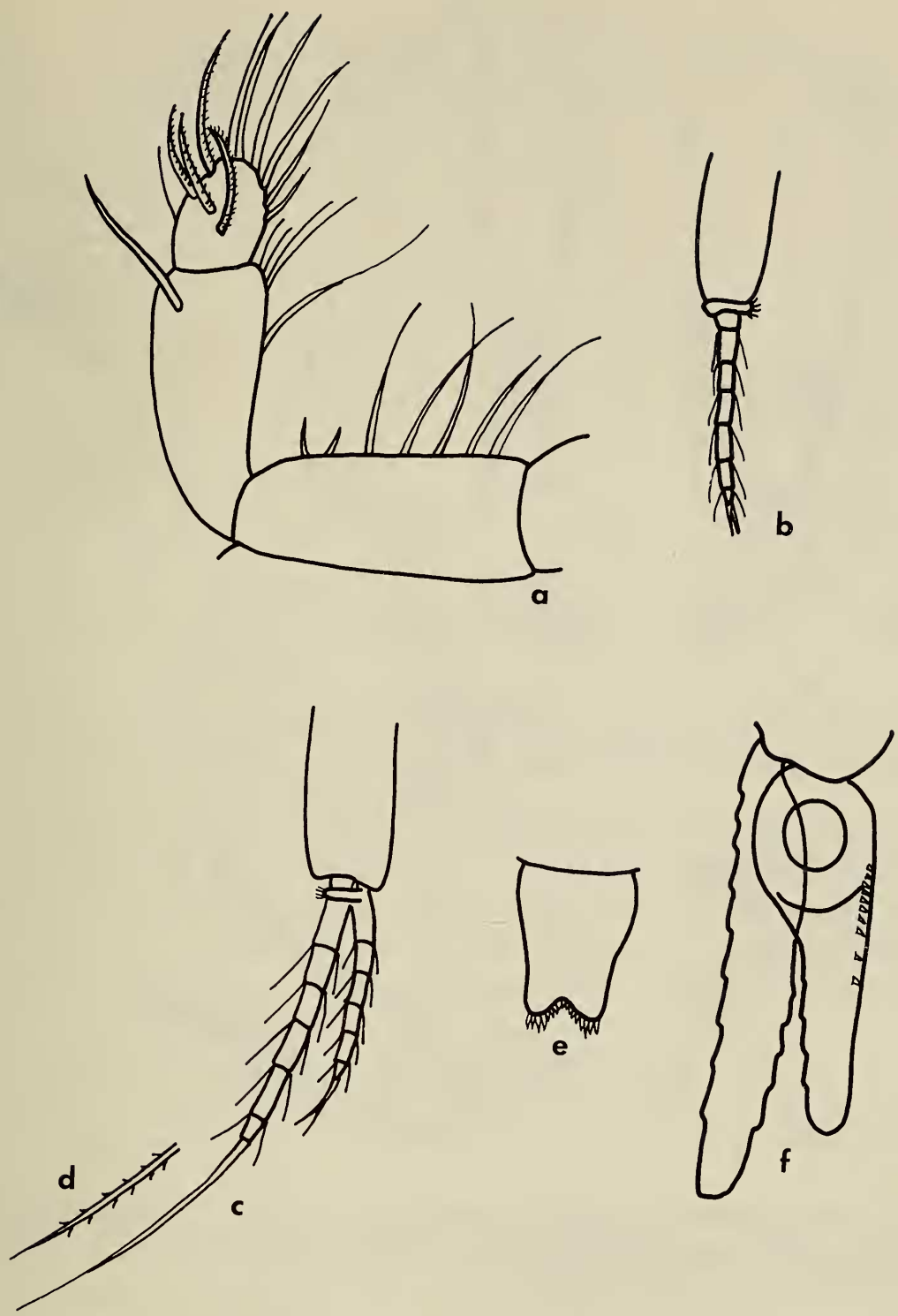

Fig. 2. *Cubanomysis mysteriosa:* a, Thoracic endopod 2, distal segments, ♂; b, Pleopod 1, ♂; c, Pleopod 4, ♂; d, Same, terminal seta exopod, distal tip; e, Telson, ♂; f, Uropod, ♂.

Mysidopsis cathengelae, new species
Figs. 3–4

Material examined.—Southern California, San Onofre State Beach, 10 October 1979: ♂ holotype (USNM 184076), 2 ♂, 5 ♀, 1 Imm ♂ paratype (USNM 18077), 1 ♂, 2 ♀, 2 Imm ♂ paratype (USNM 184078).

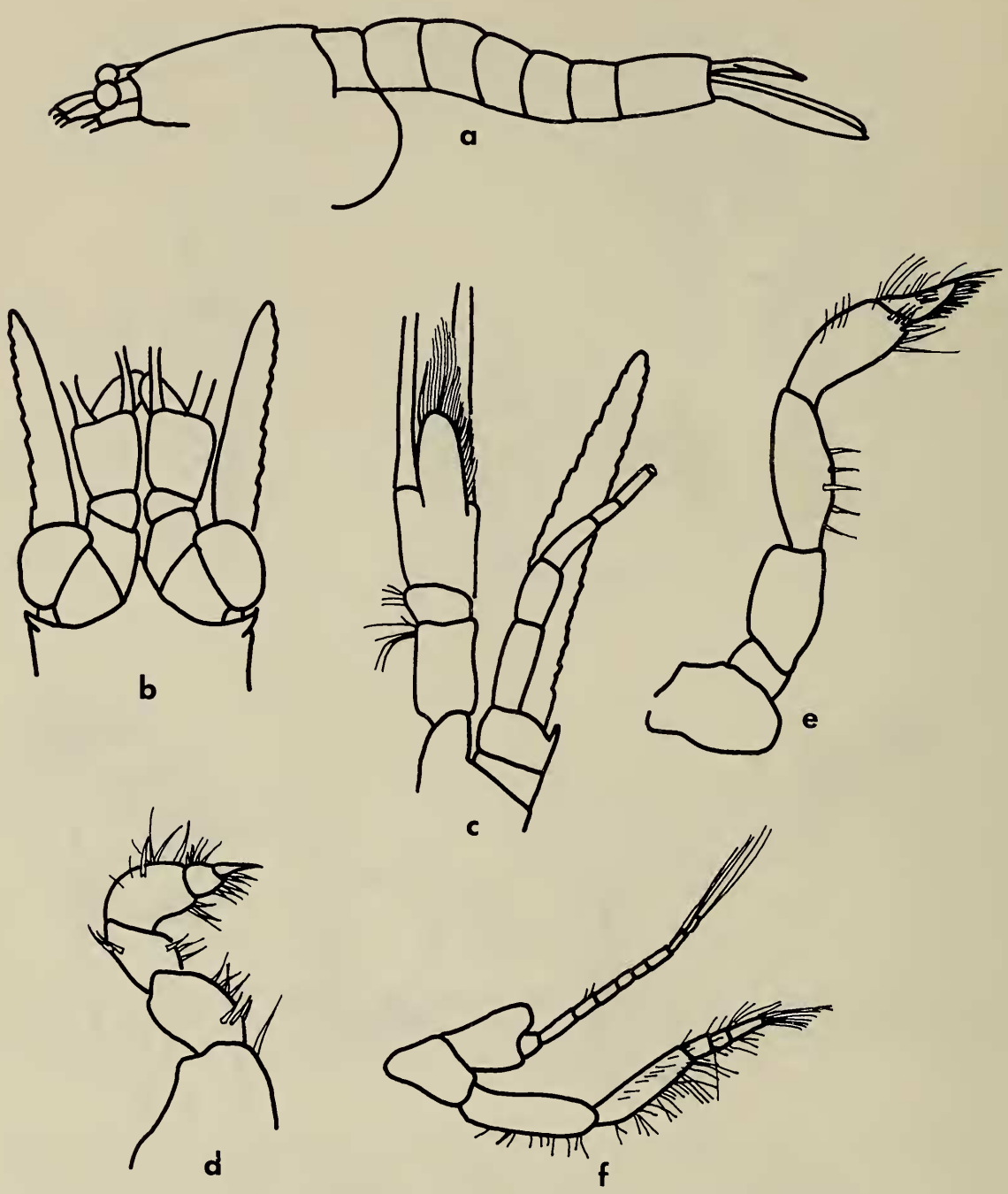

Fig. 3. *Mysidopsis cathengelae:* a, Whole body, lateral, ♀; b, Rostrum, eyes, antennular peduncle, antennal scale, dorsal, ♂; c, Antennular peduncle, antennal scale, antennal peduncle, ventral; ♂; d, Thoracic endopod 1, ♀; e, Thoracic endopod 2, ♀; f, Thoracic limb 3, ♀.

Etymology.—Named for the California zoologist, Dr. Catherine Engel.

Description.—Medium sized, robust mysid, 10 mm. Carapace produced between eyes into pointed, triangular rostral plate extending nearly to end of eyestalks. Eyes of moderate size, cornea occupying half of whole eye in dorsal view. Antennal scale 9 times as long as broad, narrowly lanceolate, setose all around, without a distal joint, apex bluntly rounded, extending beyond peduncle of antennule by $^2/_5$ (♂) to ½ (♀) of its length. Distal joint of antennal peduncle ⅔ length of preceding joint, whole peduncle extending less than ½ length of antennal scale.

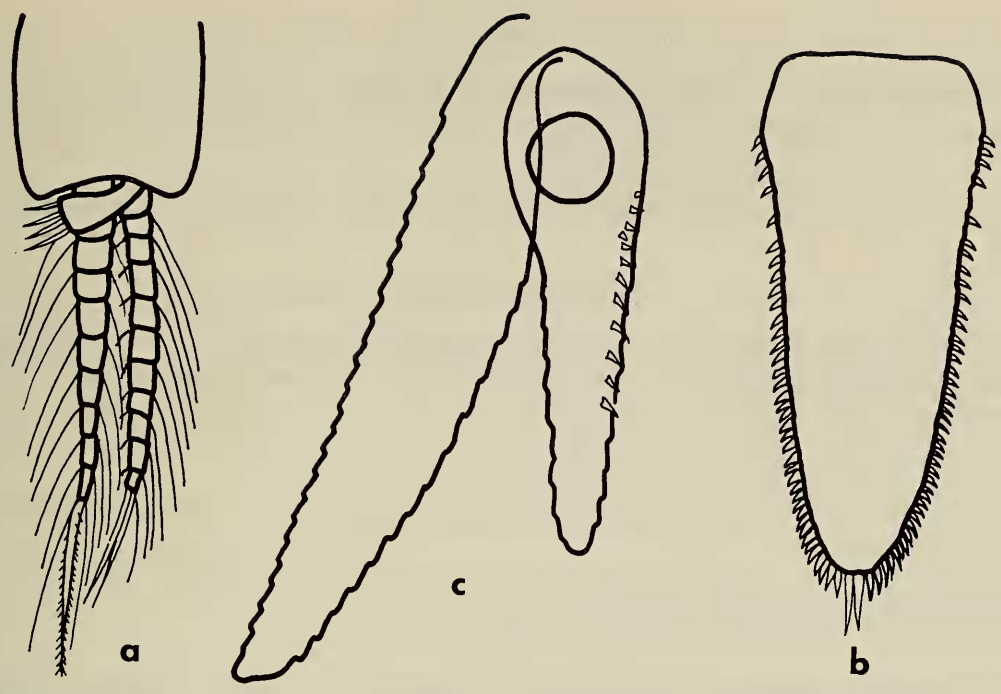

Fig. 4. *Mysidopsis cathengelae:* a, Pleopod 4, ♂; b, Telson, ♀; c, Uropod, ♀.

Maxillulae with inner lobe small and armed with 2 setae. Maxilla characteristic of genus, exopod well developed, long and slender, setae present on outer margin, distal setae much longer than proximal setae.

Endopod of first thoracic limb short and robust, of form characteristic of genus, dactylus with claw, outer margin armed with 7 heavy and 3 light simple setae. Endopod of second thoracic limb slightly longer than and less robust than endopod of first limb. Endopod of third thoracic limb longer and more slender than the second thoracic limb, sixth joint divided into 3 subjoints, second subjoint shortest, third subjoint longest.

Sixth abdominal somite about 1⅔ times as long as fifth.

Pleopods in male typical for genus, fourth pair with exopod longer than endopod, exopod terminating in long, plumose seta, endopod terminating in two long, simple setae.

Telson as long as sixth abdominal somite, extending ¾ length of inner uropod, linguiform, apex entire and narrowly rounded. Lateral margins armed with about 40 short spines extending throughout entire length, 5–6 spines distinctly set, remaining spines closely set, gradually increasing in length distally, apex armed with a pair of long spines $^1/_{10}$ length of telson.

Inner margin of inner uropod armed with 12 spines, increasing in length distally, distal 8 lying more remotely from each other than proximal 4. Exopod of uropod more than ⅓ again as long as endopod.

Remarks.—Because of the similarity in telsons, this species may be superficially confused with *M. californica* Tattersall. It can be distinguished from the latter by the following features: 1) larger size, 2) absence of distal suture on antennal scale, 3) fewer spines on inner margin of the endopod of uropod.

Acknowledgments

I wish to thank Dr. M. Bacescu, Museul de Istorie Naturala "Grigore Antipa," for his help with the genus *Cubanomysis,* and Dr. T. E. Bowman for his help with *M. cathengelae* and the preparation of this manuscript.

Funding for this study was supplied by the Marine Review Committee, Inc.

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